

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

REC'D 17 JUN 2004

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| Applicant's or agent's file reference 62413A | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/US 03/07592 | International filing date (day/month/year) 11.03.2003 | Priority date (day/month/year) 11.03.2002 |
| International Patent Classification (IPC) or both national classification and IPC D06M11/40, D06M11/40 | | |
| Applicant DOW GLOBAL TECHNOLOGIES INC. et al. | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

I ☒ Basis of the opinion

II ☐ Priority

III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



IV ☐ Lack of unity of invention

V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

VI ☐ Certain documents cited

VII ☐ Certain defects in the international application

VIII ☐ Certain observations on the international application

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| Date of submission of the demand 22.09.2003 | Date of completion of this report 16.06.2004 |
| Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 | Authorized Officer Koegler-Hoffmann, S Telephone No. +49 89 2399-8611 <div style="text-align: right;">  </div> |

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/US 03/07592

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-16 as originally filed

Claims, Numbers

1-20 received on 04.03.2004 with letter of 04.03.2004

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | |
|-------------------------------|-------------|------------------|
| Novelty (N) | Yes: Claims | 5,10,16-19 |
| | No: Claims | 1-4,6-9,11-15,20 |
| Inventive step (IS) | Yes: Claims | |
| | No: Claims | 1-20 |
| Industrial applicability (IA) | Yes: Claims | 1-20 |
| | No: Claims | |

2. Citations and explanations

see separate sheet

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Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: WO 01/85843 A

D2: WO 99/63021 A

D3: US-A-3 507 609

2. The application is open to the following objections.

2.1 Most of the features in the article claim 1 relate to a method in treating the article rather than clearly defining the article in terms of its technical feature. The intended limitations are therefore not clear from this claim, contrary to the requirements of Article 6 PCT.

Moreover, the process feature in claims 1 and 11 that the article is treated with one of the steps a) to e) is without any significance for the article per se, since the treatment cannot be deduced from the end-product.

Since the treatment cannot be deduced from the end product

- both claims claim an article (claim 1) or a garment (claim 11) which are characterized in that the article and the garment exhibit growth of less than 20% as determined according to ASTM D3107.
- there is no difference between the garment claimed in claim 9 and the treated garment claimed in claim 11 (Article 6 PCT).

2.2 According to the claims and to page 5, third paragraph the term "growth" can be determined using ASTM D3107. In none of the examples given in the current application said ASTM determination is used. It is therefore unclear whether the examples fall within the scope of the claims (Article 6 PCT).

2.3 According to the example 3 of the current application the article is treated with a sodium hypochlorite solution at a temperature of 120°F (50°C). Thus, example 3 does

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not fall within the scope of claims 1 and 11 (Article 6 PCT).

2.4 The document **D1** relates to an elastic article which comprises a homogeneously branched ethylene interpolymer. Said elastic article (fibres) are useful in various durable or repeat-use fabric applications such as, clothing, garments and sports apparel. The elastic fibres can be conveniently formed into fabrics using well-known techniques such as , by using co-knitting techniques with cotton, nylon, and/or polyester fibres (see D1: page 1, lines 5 to 30; page 9, line 28 to page 11, line 20, page 36, lines 9 to 33, experimental, page 55 ff).

It follows from the current application on page 6 (lines 4 and 6) that the fibres used are already known in the art and are disclosed in document D1.

Thus, the elastic article disclosed in D1 must be capable of surviving the treatments mentioned in claim 1 of the current application and must have consequently the same growth after the treatment as claimed. In other words no differences can be seen between the article claimed in claims 1 to 4 or the subject matter of claims 6 to 9 of the current application and the article/fabric/ garment disclosed in D1.

It follows from the table on page 9 of the current application that a fabric containing Affinity fibres have a growth of 2.9%. since there is no difference between the material used in the current application and the material described in D1 it follows that the garments disclosed in D1 have the same properties as the garments claimed in claim 11 of the current application (growth of no more that about 20%).

Since the treatment cannot be deduced from the end product the subject matter of claims 11 to 15 and 20 does not fulfil the requirements of Articles 33(2) and 33(3) PCT.

Furthermore, D1 relates to sports apparel. Stone washed article are known in the art. Thus, claims 5 and 10 of the current application seems not to fulfil the requirements of Article 33(3) PCT.

Moreover, document **D2** relates to a method of making polyolefinic elastic articles from cured, irradiated or cross-linked ethylene interpolymers which articles are shaped article (for example fibre) having improved temperature elasticity. Said article are useful in various durable fabric applications such as, clothing, garments and sports apparel (see D2: page 47, lines 4 to 18).

For the same reasons as mentioned above for document D1, in view of D2 the subject matter of claims 1 to 4, 6 to 9, 11 to 15 and 20 does not fulfil the requirements of Articles 33(2) and 33(3) PCT and the subject matter of claims 5 and 10 does not fulfil the requirements of Article 33(3) PCT.

Document D3 discloses elastic articles comprising a growth of less than 20% (D3: claim 6, table). The process feature in claims 1 and 11 that the article is treated with one of the steps a) to e) is without any significance for the article per se, since the treatment cannot be deduced from the end-product.

Thus, in view of D3 the subject matter of claims 1 and 11 does not fulfil the requirements of Articles 33(2) and 33(3) PCT.

2.5 The documents **D1** and **D2** are regarded as being the closest prior art to the subject-matter of claims 1 or 11.

Both documents address the same problem as in the current application of providing stable elastic articles having good elasticity at elevated temperatures and good wash and dry stability as well as good heat setting characteristics (see D1: page 9, line 6 to 8; D2 : page 8, lines 14 to 22).

The article claimed in claims 1 and 11 of the current application comprises the same material as disclosed in documents D1 and D2.

The treatment steps a) to e) and the ASTM method for determining growth disclosed in claims 1 and 11 are known in the art. One points out again that said treatment steps cannot be deduced from the claimed products. However even if one considers these treatment steps, no inventive step can be seen in a method wherein an already known article is treated with already known methods of treating.

The discovery of the alleged advantage (growth of less than 20% after the article has been treated) cannot support the case of inventive step, since the articles known from documents D1 and D2 must have had already the same properties.

Thus, the subject matter of claims 1 and 11 does also not fulfil the requirements of Article 33(3) PCT.

Dependent claims 2 to 10 and 12 to 20 contain features which are either obvious or known in the art. Claims 2 to 10, 12 to 20 do not fulfil the requirements of Article 33(3) PCT.

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WHAT IS CLAIMED IS:

1. A durable elastic article capable of surviving treatment wherein the treatment is selected from the group consisting of:
 - a) exposure to a 10% by weight sodium hypochlorite solution for a period of at least 90 minutes at a temperature of at least 140°F;
 - b) exposure to a 5% by weight permanganate solution for a period of at least 90 minutes at a temperature of at least 140°F;
 - c) 50 cycles of industrial laundering at temperatures at least about 65°C;
 - d) 20 cycles of drycleaning with perchloroethylene; or
 - e) mercerization;wherein surviving means that after treatment the fabric exhibits growth of less than 20%.
2. The article of Claim 1 wherein the growth is less than 10%.
3. The article of Claim 1 wherein the growth is less than 8%.
4. The article of Claim 3 which is further capable of surviving two or more of the treatments.
5. The fabric of Claim 3 wherein the fabric is stone washed.
6. The fabric of Claim 1 wherein the fabric comprises fiber comprising crosslinked homogeneously branched ethylene polymer.
7. The fabric of Claim 1 wherein the fabric is a woven or knitted fabric.
8. A fabricated article made from the fabric of Claim 1.
9. A garment made from the fabric of Claim 1.
10. The garment of Claim 9 wherein the garment is swimwear.
11. A treated garment made from elastic fabric wherein the treatment is selected from the group consisting of:
 - a) exposure to a 10% by weight sodium hypochlorite solution for a period of at least 90 minutes at a temperature of at least 140°F;
 - b) exposure to a 5% by weight permanganate solution for a period of at least 90 minutes at a temperature of at least 140°F;
 - c) 50 cycles of industrial laundering at temperatures at least about 65°C;
 - d) 20 cycles of drycleaning with perchloroethylene; and

**REPLACED BY
ART 34 AMDT**

e) mercerization;

wherein the garment exhibits growth of no more than about 20%.

12. The garment of Claim 11 wherein the treatment was done to the fiber prior to making the fabric.

13. The garment of Claim 11 wherein the treatment was done to the fabric prior to assembling the garment.

14. The garment of Claim 11 wherein the treatment was done to the fabricated garment.

15. The garment of Claim 11 wherein the treatment included two or more elements of the group.

16. The garment of Claim 11 wherein the garment is swimwear.

17. The garment of Claim 11 wherein the fabric is denim.

18. The garment of Claim 11 wherein the garment is a uniform.

19. The garment of claim 18 wherein the uniform is a rental uniform.

20. The garment of claim 11 wherein the garment is made from fabric comprising fibers made from homogeneously branched ethylene polymer